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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,750	11/30/2001	Akira Kato	Q67505	4885

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SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3213

EXAMINER

CONTEE, JOY KIMBERLY

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/996,750	<b>Applicant(s)</b> KATO, AKIRA	
	<b>Examiner</b> Joy K. Contee	<b>Art Unit</b> 2686	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/26/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 3-9 have been considered but are moot in view of the new ground of rejection.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable by Weisshaar et al. ("Weisshaar"), U.S. Patent No. 6,580,916, previously used, in view of Son et al. (Son), U.S. Patent No. 6,813,502, recent discovered.

Regarding claim 4, Weisshaar discloses a service searching system that searches for a service in a distributed system wherein a range of services are distributed in a network, comprising:

a wireless server device (i.e., server **102** coupled to regional node **104**, e.g., server-side or backend portion) connected to the network and implementing a search service (i.e., provides remote look-up service backend) (col. 6, lines 11-33 and col. 9, lines 27-33 and col. 13, lines 57-59);

a wireless terminal device (i.e., client-side or front-end portion, e.g., the proxy) implementing a slave search service (i.e., remote look-up service front-end), being

capable of communicating with the server [by wireless], and being capable of utilizing the master search service, wherein:

the wireless terminal device includes storage means (i.e., service framework service registry **250**) for caching at least one service object obtained through the master search service (col. 14, lines 12-13 and 29-53);

in the case of searching for the service through the slave search service, the wireless terminal device begins by searching the at least one service object cached in the storage means (col. 14, lines 40-50;

in the case of failing to detect the service (e.g., service framework **235** responds to application that service XYZ is not found) in the slave search service (i.e., remote service front-end), the wireless terminal device searches for the service through the master search service (i.e., remote service backend) (col. 21, lines 34-57 and col. 22, lines 50-67);

wherein, when the wireless terminal device searches the wireless server device for the service through the search service, communication between the wireless terminal device and the wireless server device is executed by being converted into a command and a parameter (e.g., template provides interfaces to implement the service plus an array of attribute sets the further describe the service) (reads on service framework providing a way for a service-using entity whether an application or another service look up a service) in which inherently an amount of communication data is reduced (i.e., the service framework handles remote services in a manner that

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conserves memory and reduces the load on the wireless pipe) (col.13,lines 56-63 and col.4,lines 40-50 and col. 15,lines 42-43 and line 59 to col.16,line 3).

Weisshaar fails to explicitly disclose a master search service in the wireless server.

In a similar field of endeavor, Son discloses a wireless server with a master search (col. 7,lines 3-43).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include a master search for the purpose of allowing the server to refine its search (see Son col. 7,lines 9-11).

4. Claims 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weisshaar, previously used and Son, recently discovered, in view of Ben-Shachar et al. ("Ben-Shachar"), U.S. Patent No. 6,209,018, previously used.

Regarding claim 3, Weisshaar discloses a wireless server device (i.e., server **102** coupled to regional node **104**, e.g., server-side or backend portion)connected to the network and implementing a search service (i.e., provides remote look-up service backend) (col. 6, lines 11-33 and col. 9,lines 27-33 and col. 13, lines 57-59);

a wireless terminal device (i.e., client-side or front-end portion, e.g., the proxy) implementing a slave search service (i.e., remote look-up service front-end), being capable of communicating with the server [by wireless], and being capable of utilizing the master search service, wherein:

the wireless terminal device includes storage means (i.e., service framework service registry **250**) for caching at least one service object obtained through the master search service (col. 14, lines 12-13 and 29-53);

in the case of searching for the service through the slave search service, the wireless terminal device begins by searching the at least one service object cached in the storage means (col. 14, lines 40-50;

in the case of failing to detect the service (e.g., service framework **235** responds to application that service XYZ is not found) in the slave search service (i.e., remote service front-end), the wireless terminal device searches for the service through the master search service (i.e., remote service backend) (col. 21, lines 34-57 and col. 22, lines 50-67).

Weisshaar fails to explicitly disclose a master search service in the wireless server.

In a similar field of endeavor, Son discloses a wireless server with a master search (col. 7, lines 3-43).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include a master search for the purpose of allowing the server to refine its search (see Son col. 7, lines 9-11).

Also Weisshaar fails to explicitly disclose the additional limitations here, wherein: priority data corresponding to each of the at least one service object that is to be cached in the wireless terminal device is generated on the basis of at least one selected from necessity, importance and frequency in use of each of the at least one service object in

the wireless terminal device; the priority data is related to each of the at least one service object and cached together; and the priority data is updated according to use of the at least one service object.

In a similar field for endeavor, Ben-Shachar discloses a service framework for a distributed object network system including a server, and a pool of workers for a service located on the server, wherein the workers execute service requests (i.e., reads on lookup service) from a client in a distributed object network system (see col. 3, lines 26-39) priority data corresponding to each of the at least one service object (e.g., worker objects) that is to be cached in the wireless terminal device is generated on the basis of at least one selected from necessity (e.g., increasing order of workload), importance (e.g., workers assigned to work for high priority clients, see col. 26, lines 49-51) and frequency (e.g., how many workers are instantiated), see col. 14 ,lines 29-37) in use of each of the at least one service object in the wireless terminal device (col. 24, lines 1-42);

the priority data is related to each of the at least one service object and cached together (i.e., the client wait queue allocates the prioritized requests and puts them in queue) (col. 26, lines 34-55); and

the priority data is updated (i.e., workers are moved from one queue to another appropriately to priority sub-queues) according to use of the at least one service object (col. 26, 51-55).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include priority based access to requested services for

the purpose of ensuring access to system resources as suggested by the functions of the resource manager 239 in Weisshaar (see col. 9, lines 5-10).

Ben-Shachar further discloses when the cached at least one service object overflows in order to cache a new service object in the wireless terminal device, at least one low-priority service object (e.g., number of workers) is deleted on the basis of the priority data (col. 6, lines 29-39 and lines 58-67).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include priority based access to requested services for the purpose of ensuring access to system resources as suggested by the functions of the resource manager 239 in Weisshaar (see col. 9, lines 5-10).

Regarding claim 5, Weisshaar, Son and Ben-Shachar further discloses the service searching system as claimed in claim 3. Weisshaar disclose the additional limitation in claimed wherein, when the wireless terminal device searches the wireless server device for the service through the master search service, communication between the wireless terminal device and the wireless server device is executed by being converted into a command and a parameter (e.g., template provides interfaces to implement the service plus an array of attribute sets the further describe the service) (reads on service framework providing a way for a service-using entity whether an application or another service look up a service) in which inherently an amount of communication data is reduced (i.e., the service framework handles remote services in a manner that conserves memory and reduces the load on the wireless pipe)



(col.13,lines 56-63 and col.4,lines 40-50 and col. 15,lines 42-43 and line 59 to col.16,line 3).

Regarding claim 6, Weisshaar, on and Ben-Shachar further discloses the service searching system as claimed in claim 3, respectively, wherein, when the wireless terminal device searches the wireless server device for the service through the master search service, communication between the wireless terminal device and the wireless server device is executed by being converted into a command and a parameter (e.g., template, see Weisshaar col. 18, line 20-24) in which, inherently, an amount of communication data is reduced (see Weisshaar col. 19, lines 25-28).

Regarding claim 7, Weisshaar discloses a wireless server device (i.e., server **102** coupled to regional node **104**, e.g., server-side or backend portion) connected to the network and implementing a master search service (i.e., provides remote look-up service backend) (col. 6, lines 11-33 and col. 9, lines 27-33 and col. 13, lines 57-59);

a wireless terminal device (i.e., client-side or front-end portion, e.g., the proxy) implementing a slave search service (i.e., remote look-up service front-end), being capable of communicating with the server [by wireless], and being capable of utilizing the master search service, wherein:

the wireless terminal device includes storage means (i.e., service framework service registry **250**) for caching at least one service object obtained through the master search service (col. 14, lines 12-13 and 29-53);

in the case of searching for the service through the slave search service, the wireless terminal device begins by searching the at least one service object cached in the storage means (col. 14, lines 40-50);

in the case of failing to detect the service (e.g., service framework **235** responds to application that service XYZ is not found) in the slave search service (i.e., remote service front-end), the wireless terminal device searches for the service through the master search service (i.e., remote service backend) (col. 21, lines 34-57 and col. 22, lines 50-67);

further discloses the service searching system as claimed in claim 1, wherein, when the wireless terminal device searches the wireless server device for the service through the master search service, communication between the wireless terminal device and the wireless server device is executed by being converted into a command and a parameter (e.g., template, see col. 18, line 20-24) in which, inherently, an amount of communication data is reduced (col. 19, lines 25-28).

Weisshaar fails to explicitly disclose a master search service in the wireless server.

In a similar field of endeavor, Son discloses a wireless server with a master search (col. 7, lines 3-43).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include a master search for the purpose of allowing the server to refine its search (see Son col. 7, lines 9-11).

Also, Weisshaar fails to explicitly disclose means for assuring communication quality comprising at least one of error-retry and error-recovery.

Ben-Shachar further discloses means for assuring communication quality comprising at least error-retry (reads on the approach which allows the framework to support fault tolerant features such as automatically retrying the request if the original request fails) (col. 10, lines 12-15).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include means in the wireless protocol for retrying a request for the purpose of handling encountered errors (see Ben-Shachar, col. 10, lines 13-15).

Regarding claims 8 and 9, Weisshaar, Son and Ben-Shachar further discloses the service searching system as claimed in claim 3, respectively, wherein a wireless communication protocol (e.g., HTTP, TCP/IP and UDP/IP) between the wireless terminal device and the wireless server device implements a means for assuring communication quality (as is the purpose of any protocol) in a wireless section as a protocol (see Weisshaar, col. 4, lines 38-46).

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K. Contee whose telephone number is 571.272.7906. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571.272.7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JC

  
**JOY K. CONTEE**  
**PATENT EXAMINER**